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ABSTRACT

In response to core indicators of effectiveness developed by the American Association of Community Colleges (AACC), the Colorado Community College and Occupational Education System (CCCOES) initiated a system-wide project to develop core indicators specific to the state's colleges. The project was intended to reflect the immediate needs for the public and the legislature to understand the performance of the CCCOES in many key areas. Based on the AACC indicators and meetings with college presidents, vice presidents, deans, and research directors, the CCCOES developed the following core indicators: (1) student goal attainment; (2) a global measure of persistence, completion, and transfer; (3) specific persistence rates; (4) degree and certificate completion; (5) transfer; (6) a transfer rate for each college; (7) graduate employment in the workforce; (8) success in subsequent, related coursework for basic skills students; (9) participation rate in service area for credit programs; (10) employer assessment of students; (11) demonstration of critical literacy skills; (12) demonstration of citizenship skills; (13) client assessment of programs and services; and (14) responsiveness to community needs. The CCOES was given the responsibility for developing the first nine indicators, while the final five are the responsibility of individual colleges. Systemwide data on outcomes as of fall 1994 for the first nine indicators are included. (TGI)

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Core Indicators of Effectiveness

Colorado Community College and Occupational Education System

ED 392 505

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Core Indicators of Effectiveness

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Colorado Community College and Occupational Education System
Core Indicators of Effectiveness Report
December 1995

Background

The landscape of higher education, especially across community colleges, is changing dramatically. Federal legislation, including the Student Right to Know regulations which mandate reporting of graduation statistics, dramatic changes in institutional eligibility requirements for federal financial aid, evolving requirements for accreditation, mandates for Perkins vocational funds reporting, changing student populations, and increased scrutiny by state governments and the public have created a challenging environment for community colleges. Some institutions have responded to this agenda by identifying performance indicators and building effectiveness models. Experience shows some models are uncomplicated, while some are complex. Other institutions, simply ignore effectiveness indicators until an impending accreditation review or required state or federal report reawakens interest.

Simultaneously, stakeholders in our colleges are continually faced with making judgements about institutional effectiveness. Students, community leaders, legislators, business and industry officials, faculty, and administrators make choices, about our institutions daily. As they make these choices, they intersperse information from their experience about high quality (effective) performance and poor quality (ineffective) performance into the effectiveness equation. These individuals may draw their judgements from direct experience with a college or through information gleaned from a secondary source, i.e., newspapers, television advertising, college catalogs, conversations with friends, etc. Human nature virtually guarantees that when individuals lack direct information they will not delay passing judgement on a college. Instead, their judgments will come from secondary sources that usually have little or nothing to do with institutional quality.

Community colleges typically turn to the factors that are easily quantified to respond to questions about institutional goals. Historically, these measures have included growth in programs, budgets, and enrollments. Enrollment growth is the most frequently used indicator of effectiveness, but its use as the sole indicator of effectiveness opens the community college to attack by critics who claim that quantity, as expressed by enrollment, camouflages a lack of quality. Other indicators, besides growth, may better serve the long-term health of the community colleges, if these indicators account for differences in size, location, funding, campus culture, and administrative philosophies.

Colleges without a framework to address effectiveness also find it difficult to argue persuasively in the state and federal policy and budget setting arenas. This vacuum has spurred legislators and other policy-makers to create a sweeping, and often bewildering, array of accountability requirements. In Colorado, the state currently pursues accountability through HB 1187. The Colorado Commission on Higher Education (CCHE) now serves as mediator between colleges and the legislature. On the federal level, the impact of requirements found under recent federal legislation will require each campus to adopt a framework for educating internal and external audiences about institutional effectiveness.

Project Planning and Methodology

In response to these issues, Colorado Community College and Occupational Education System (CCCOES) staff, with the Presidents' Program and Planning Committee, initiated a system-wide project designed to develop core indicators of effectiveness, hoping that this project would provide a much-needed focus on effectiveness through identifying a small array of indicators. A framework chosen for this project is a report prepared by the American Association of Community Colleges (AACC) in 1994, Community Colleges: Core Indicators of Effectiveness. This report was the result of work by community college executive officers, university professors, and higher education officials. CCCOES staff held a series of meetings and discussions throughout 1995 with college presidents, vice presidents and deans, and research and assessment directors from all system colleges, examining AACC's 13 core indicators and carefully re-drawing operational definitions of these indicators for the system.

The consensus from the parties consulted in developing the project is that AACC's 13 core indicators reflect the immediate needs for the public and the legislature to understand the performance of our colleges in many key areas. Meanwhile, these indicators, if adopted nationally, are also characterized by generalizability across institutions, ease and efficiency of use, relevance to community college mission, and significance to multiple customers.

While developing the operational definitions of the core indicators, CCCOES staff examined all the available data sources to make sure that the indicators could be carried out regularly across the system and over the years to come. Because of this scrutiny, reliable and valid data sources were chosen to develop this report, and some indicators were left for individual colleges to develop. It is anticipated that each CCCOES campus will proceed with development of non-system generated indicators.

The data bases used for this report include: (1) CCCOES Student Information System (SIS); (2) CCHE Student Unit Record Data System (SURDS) extract files; (3) CCCOES VE135 Follow-Up system; (4) Integrated Postsecondary Data System (IPEDS) reports for CCCOES institutions; and (5) U.S. Census data, 1990. Commercial software (SPSS PC+, FOCUS for Open VMS, and Quattro Pro) was used to extract data, conduct statistical analyses, and to develop graphs.

Presentation of CCCOES Indicators

The order and number in which indicators are presented here differ from previous presentation schemes. The new order corresponds to the availability across the system and to the strategy of combining several indicators to present a more comprehensive picture of student success. Indicator 2, for example, combines data on persistence, degree completion, and transfer rates to provide a global overview of system effectiveness. Insertion of this new indicator expands the total number to 14. Indicators and locus of responsibility in developing these indicators are presented below. This report contains systemwide data for Indicators 1 through 9. It is anticipated that campuses will be able to supplement this report with data which address Indicators 10 through 14.

Indicator #	Description	Development Responsibility
1	Student Goal Attainment	CCCOES
2	Persistence, Completion, and Transfer	CCCOES
3	Persistence	CCCOES
4	Degree and Certificate Completion	CCCOES
5	Transfer	CCCOES
6	Transfer Rate	CCCOES
7	Graduate Employment in the Work Force	CCCOES
8	Success in Subsequent, Related Coursework for Basic Skills Students	CCCOES
9	Participation Rate in Service Area for Credit Programs	CCCOES
10	Employer Assessment of Students	Campus
11	Demonstration of Critical Literacy Skills	Campus
12	Demonstration of Citizenship Skills	Campus
13	Client Assessment of Programs and Services	Campus
14	Responsiveness to Community Needs	Campus

Core Indicator 1: Student Goal Attainment

Measure: The proportion of Fall 1994 students (full-time and part-time) expressing intentions in the areas below.

- Associate degrees
- Vocational certificate
- Transfer
- Skill Upgrade
- Personal enrichment
- Unknown

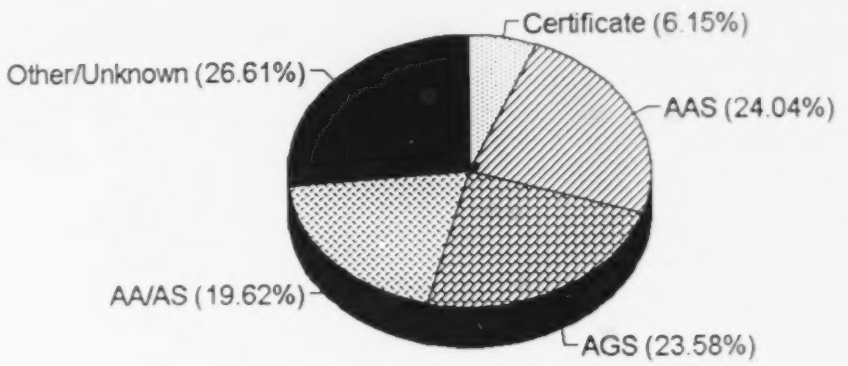
Data Source (s): SURDS extract file; and SIS

Technical Notes: The total number of students found in this indicator should match Fall 1994 headcount enrollment as reported by colleges to CCHE. Student demographics were also extracted from the colleges' official IPEDS files. Student intention, primary degree programs, students enrolled in fall 1994, and their course loads were extracted from SIS. In 1994-95 CCCOES colleges collaboratively implemented a new application form designed to better trap student goals at entry, especially transfer intentions and employment intentions. For this report, the actual program a student was enrolled in Fall 1994 is listed to supplement incomplete information student intention. It is anticipated that a more complete view of student intent will be available after system colleges have implemented the new application form.

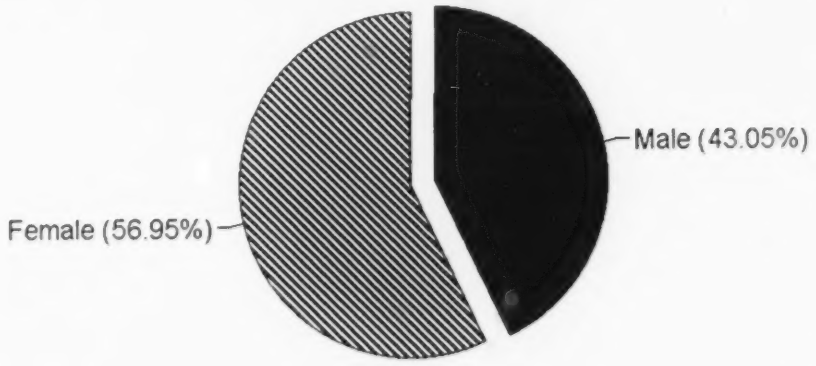
Results:

- Overall, one-fifth (20.2%) of the students said that their intention for attending a Colorado community college attendance was job-related.
- One quarter of the students expressed intention to transfer to four-year institutions, and 20 percent of them enrolled in Associate of Arts (AA) or Associate of Science (AS) programs.
- Nearly 18 percent of the students expressed intentions in personal interest or enrichment, and over one-third of them simply did not know or did not want to identify their goals.
- Nearly two-thirds of the students attempted less than 12 credit hours. The remainder attended full-time.

Student Degree Preferences
CCCOES, Fall 1994

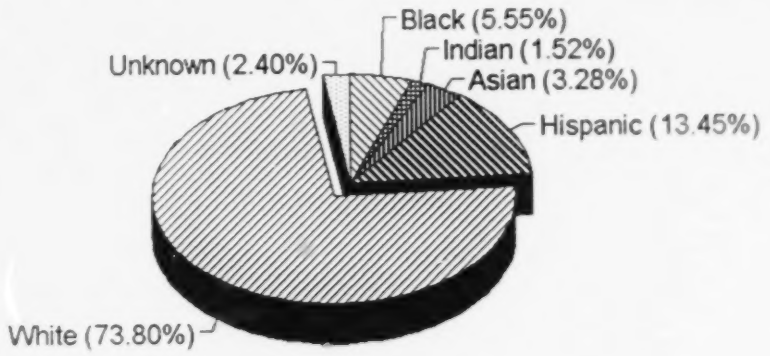


Gender
CCCOES, Fall 1994



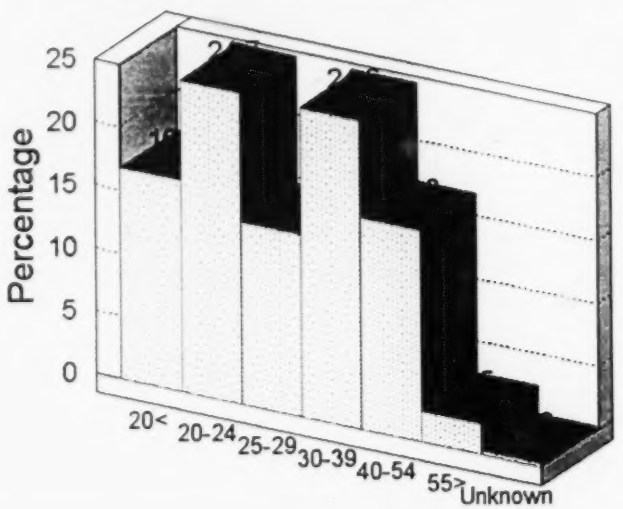
Ethnicity

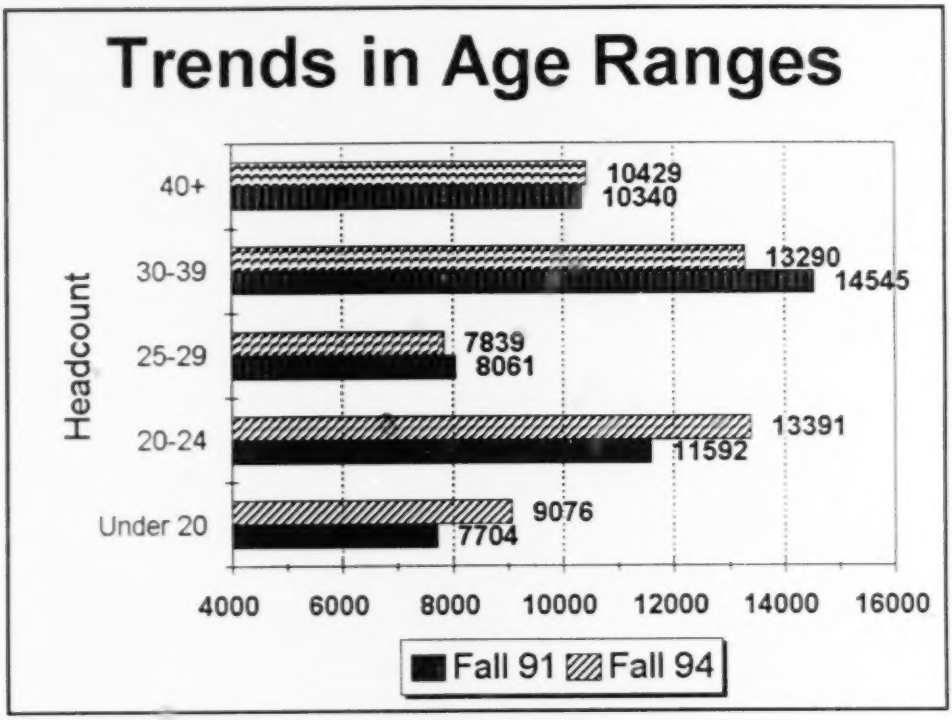
CCCOES, Fall 1994



Age Ranges

CCCOES, Fall 1994





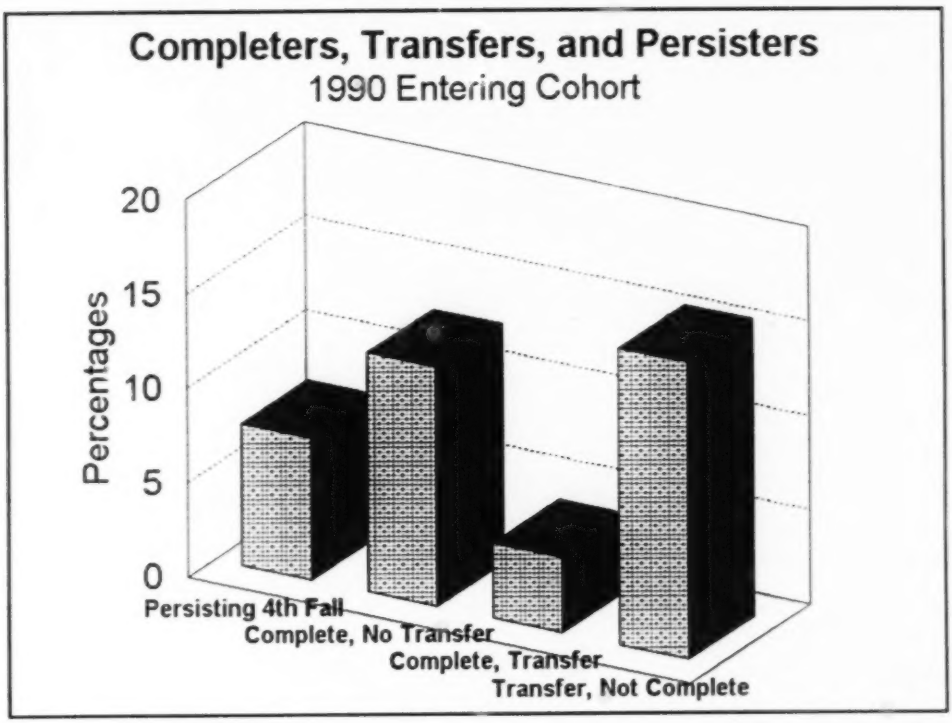
Core Indicator 2: Persistence, Completion, and Transfer

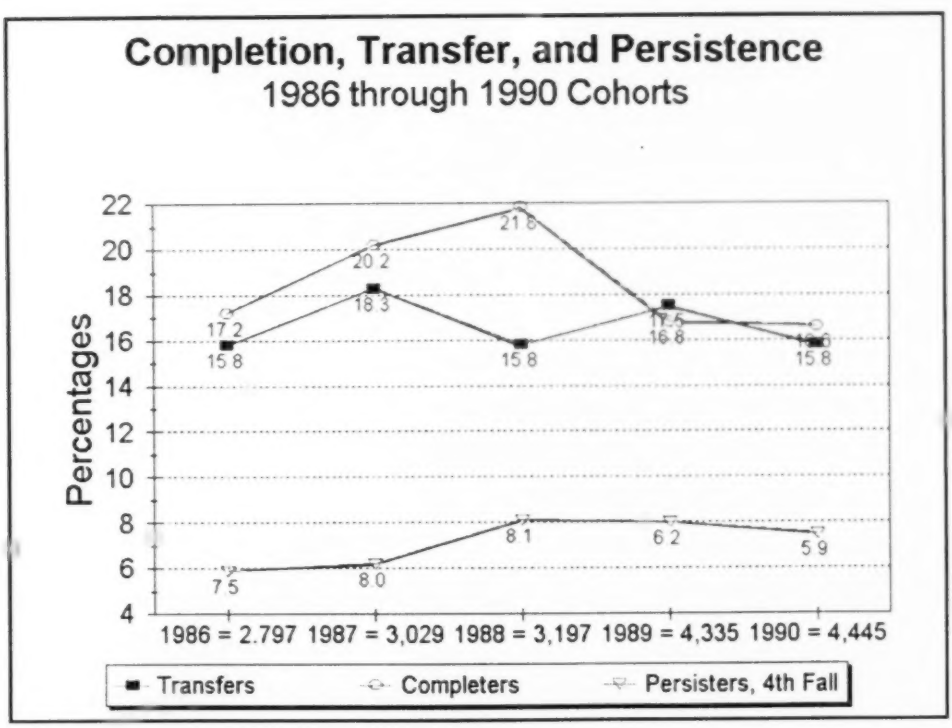
Measure: The data for this indicator are taken from a CCHE report on graduation, transfer, and persistence. The cohorts used were those who enrolled in a community college as first-time, full-time, and degree-seeking students.

Data Source(s): CCHE Graduation/Transfer/Persistence Report, April 3, 1995.

Technical Notes: Indicators 3, 4, and 5 are presented together to show the overall educational attainment of CCCOES students after the 4th fall of original enrollment. Overlap between completion, transfer, and persistence is presented graphically for the 1990 cohort in the graph below. Additionally, aggregate data for five entering cohorts (1986 to 1990) are also graphed below.

Results: The overall rate of persistence, completion, and transfer for the 1990 cohort is 40 percent. About 17 percent of the cohort completed a 2-year degree or certificate and a total of 20 percent transferred to Colorado public 4-year institutions. Among them, 4 percent of the students both completed a degree or certificate and transferred. Nearly 8 percent of the cohort were still enrolled in a community college after the 4th fall of original enrollment.


Completers, Transfers, and Persisters
1990 Entering Cohort
Percentages
20
15
10
5
0
Persisting 4th Fall
Complete, No Transfer
Complete, Transfer
Transfer, Not Complete


Completion, Transfer, and Persistence
1986 through 1990 Cohorts
Percentages
22
20
18
16
14
12
10
8
6
4
17.2
20.2
21.6
15.8
18.3
15.8
17.5
16.8
15.8
7.5
8.0
8.1
6.2
5.9
1986 = 2.797
1987 = 3,029
1988 = 3,197
1989 = 4,335
1990 = 4,445
Transfers
Completers
Persisters, 4th Fall

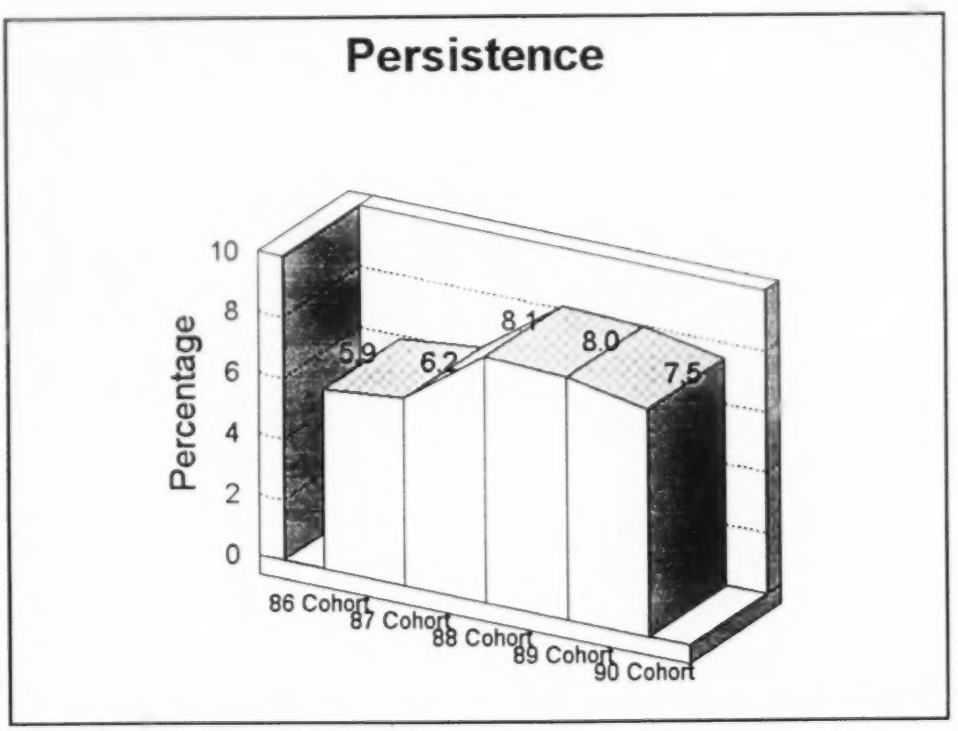
Core Indicator 3: Persistence

Measure: The proportion of Fall 1986, 1987, 1988, 1989, and 1990 first-time, full- time, degree or certificate seeking students who were still enrolled at their original institution three falls later.

Data Source(s): CCHE Graduation/Transfer/Persistence Report, April 3, 1995

Technical Notes: The data for this indicator are taken from an Ad-hoc CCHE report on graduation, transfer, and persistence. The cohorts used were those who enrolled in a community college as first-time, full-time, and degree- seeking students. It is necessary to examine persistence rates as reported in this indicator together with indicators 4 and 5 (completion and transfer) to get a complete picture about CCCOES student attainment.

Results: Systemwide persistence rates after the 4th fall of original enrollment increased by 36 percent over a five-year period.



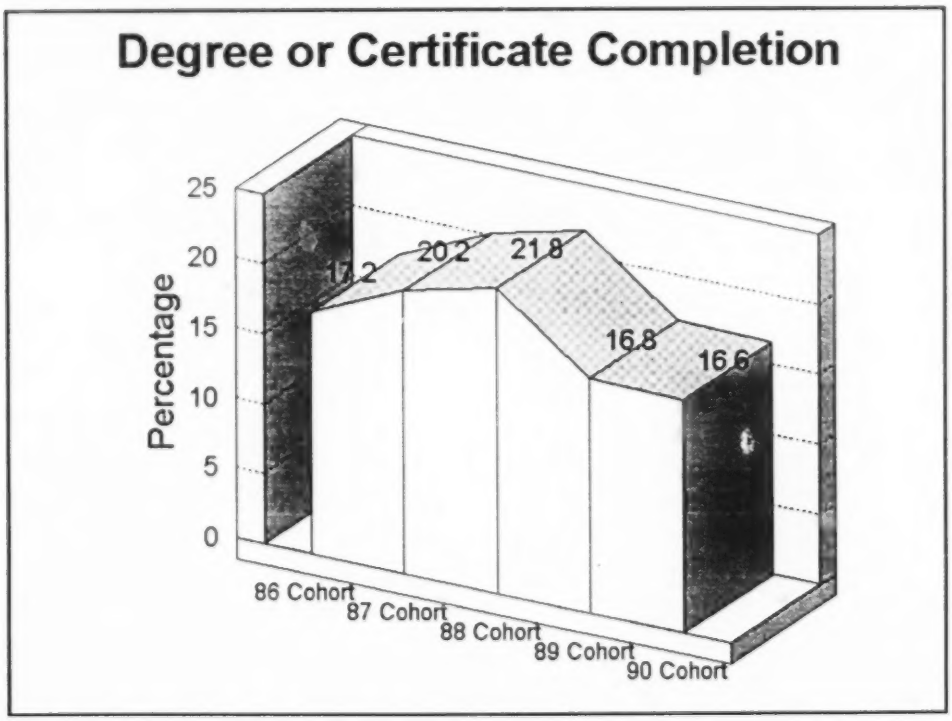
Core Indicator 4: Degree and Certificate Completion

Measure: The proportion of Fall 1986, 1987, 1988, 1989, and 1990 first-time, full- time, degree or certificate seeking students who by Spring 1994 earned Associate degrees or/and vocational certificates.

Data Source(s): CCHE Graduation/Transfer/Persistence Report, April 3, 1995.

Technical Notes: Data for this indicator are taken from the same CCHE report on graduation, transfer, and persistence. The cohorts used were those who enrolled in a community college as first-time, full-time, and degree- seeking students. The statistic includes those who completed and then transferred to a four-year institution and those who completed and did not transfer. Again, it is necessary to examine completion rates as reported in this indicator with indicators 3 and 5 (persistence and transfer) to get a complete picture about student attainment.

Results: System-wide degree and certificate completion rates have been as high as 22 percent, with individual colleges' rates approaching 40 percent for certain years. Completion figures vary from institution to institution.



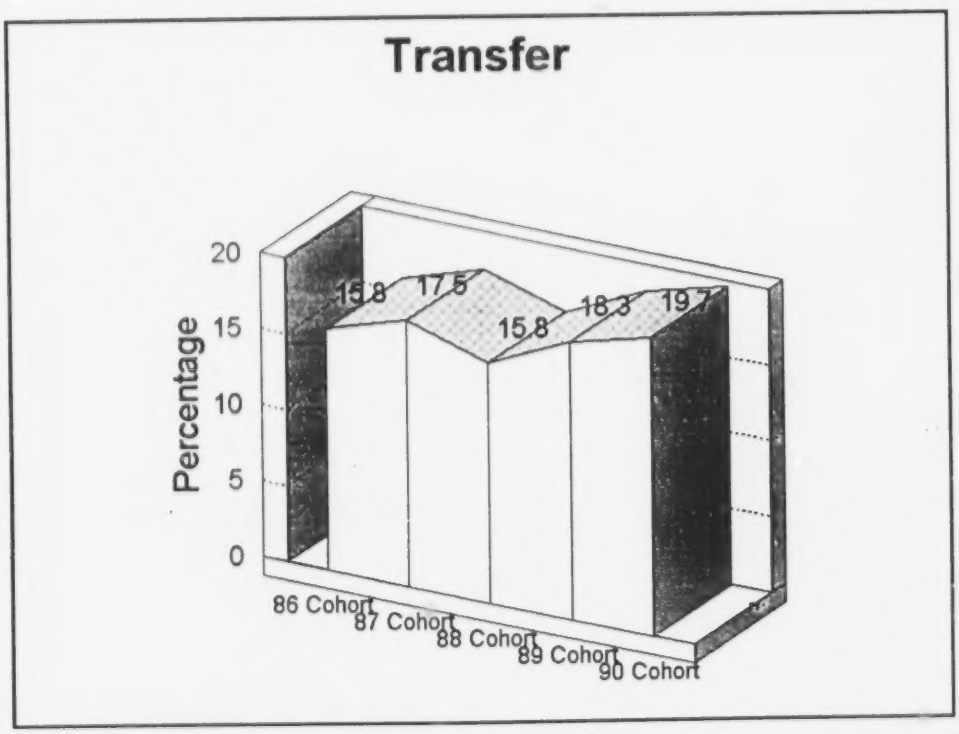
Core Indicator 5: Transfer Rate

Measure: The proportion of entering Fall 1986, 1987, 1988, 1989, and 1990 first- time, full-time, degree or certificate seeking students who transferred to Colorado public four-year institutions.

Data Source(s): CCHE Graduation/Transfer/Persistence Report, April 3, 1995.

Technical Notes: The data for this indicator are taken from the same CCHE report on graduation, transfer, and persistence. The cohorts used were those who enrolled in a community college as first-time, full-time, degree-seeking students. The number of completions includes those who completed and then transferred to a four-year institution and those who transferred without completing two-year degree or certificate. It is necessary to examine completion rates as reported in this indicator with indicators 3 and 4 (persistence and degree and certificate completion) to get a complete picture about student attainment.

Results: The system-wide transfer rates range from 16 to 20 percent, with some institutions having transfer rates over 20 percent and others producing single-digit rates.



Core Indicator 6: Performance at Transfer

Measure: A comparison of cumulative GPA's at the community college by 1993-94 degree and certificate recipients transferring to Colorado public 4-year institutions with their GPA's earned at the 4-year transfer institutions during the first year after transfer.

Data Source(s): CCCOES Research and Planning from CCHE SURDS extract file.

Technical Notes: This graph displays the average cumulative GPA's of transfer students at the community college and at Colorado 4-year public institutions. "Total" is an unduplicated count, but individuals may be duplicated across degree type. That is, an individual who received both a certificate and an AAS degree in the same year is represented in both groups but included only once in the total. The N's represent the number of individuals who actually transferred. In some cases, due to a small amount of missing data (less than 15%), the GPA'S are based on N's slightly smaller than those reported.

Results: The largest drop in GPA (3.1 to 2.6) is for the group of community college certificate recipients.

First Year after Transfer GPA Comparisons		
Degree Type	Before	After
Certificate	3.1	2.6
AAS	3.2	3.0
AS/AA	3.3	3.0
AGS	3.2	3.0

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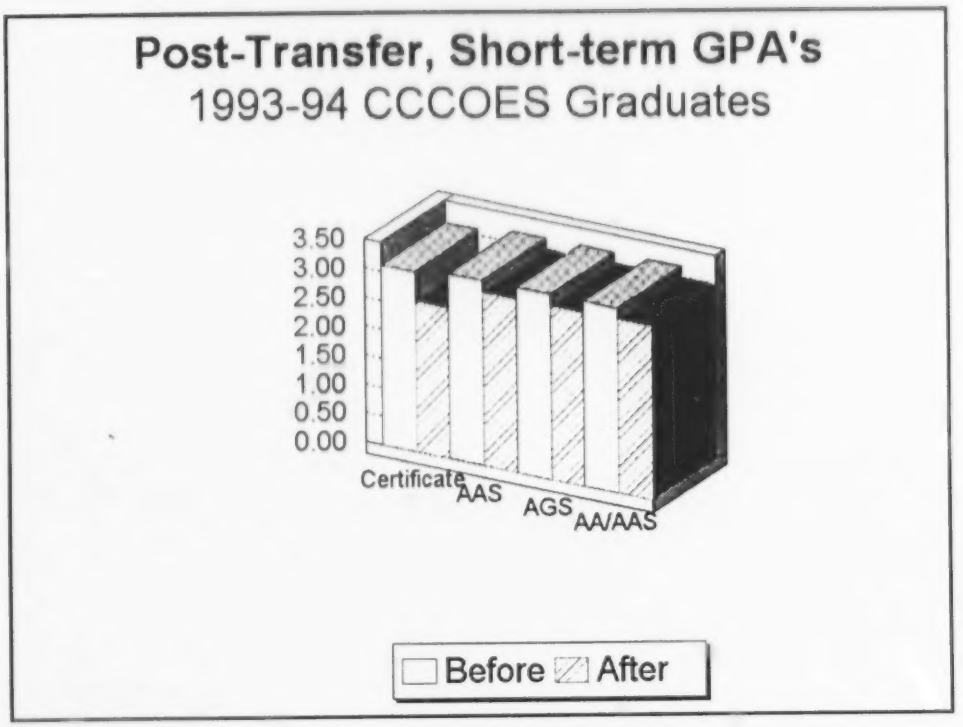


Core Indicator 7: Graduate Employment in the Work Force

Measure: The proportion of 1993-94 Associate in Applied Science degree and vocational certificate graduates in the categories below.

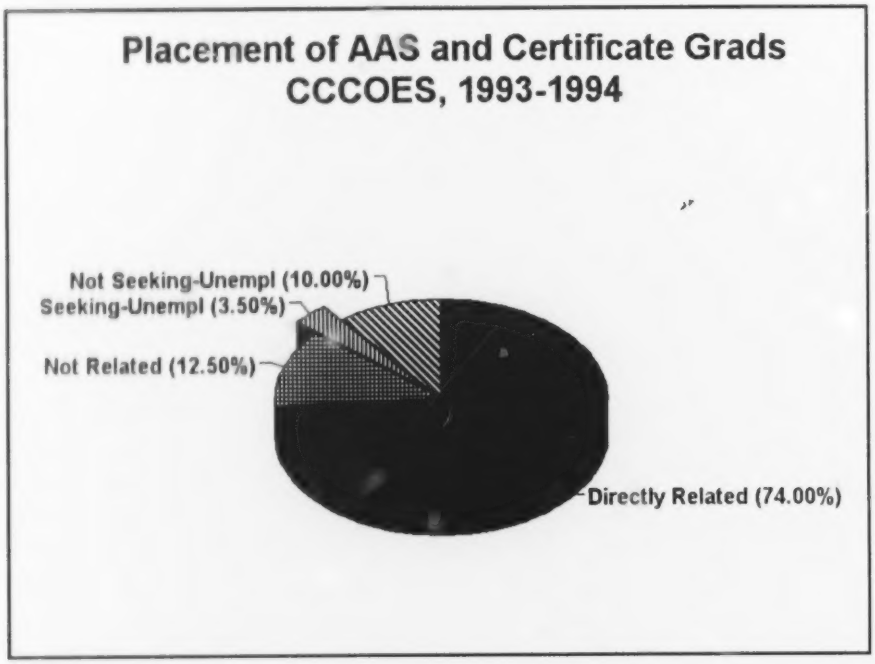
- employed related
- employed unrelated
- unemployed seeking
- unemployed not seeking and
- continuing education.

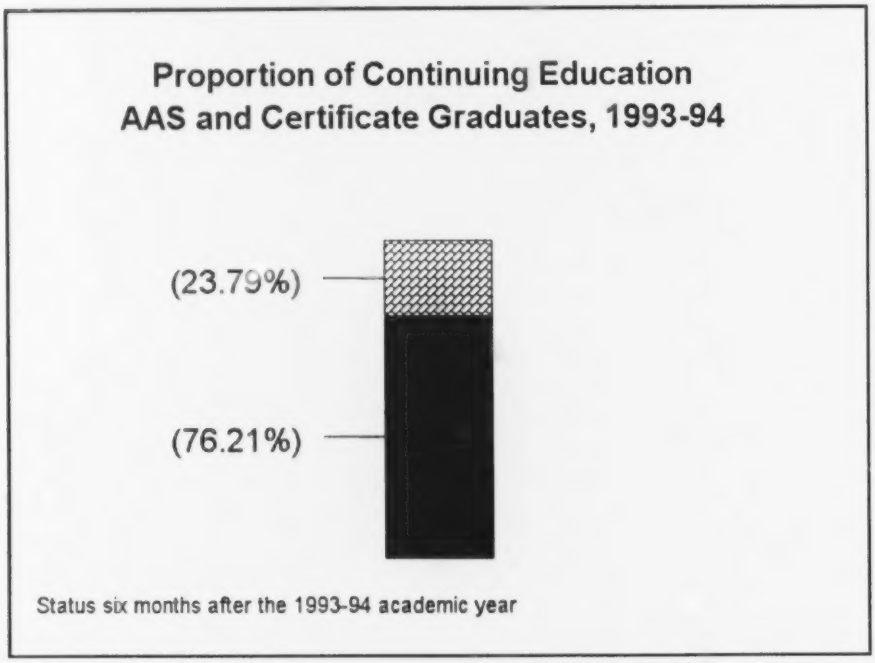
Data Source(s): CCCOES VE135 follow-up data reported by each college.

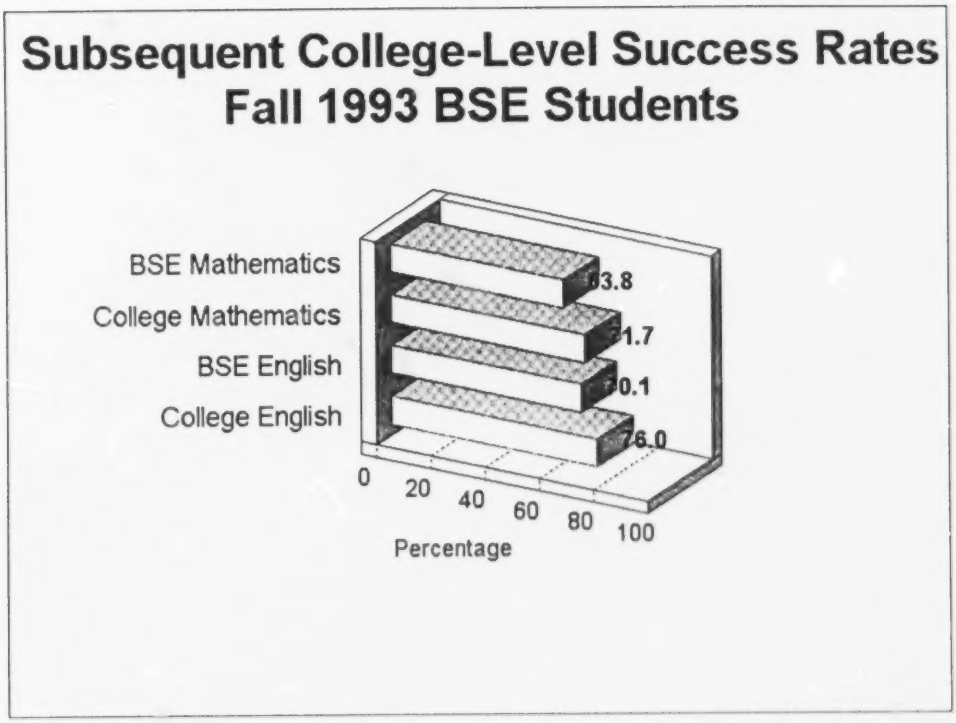
Technical Notes: The data for this indicator are from the CCCOES-maintained data base (VE135). Community college AAS and vocational certificate recipients are surveyed by each college to determine their employment and education status. Two-thirds of the 1993-1994 graduates (66.6%) were contacted in this follow-up survey. The percentages of employment and continuing education are calculated separately. Therefore, some individuals could be employed and continuing their educations simultaneously.

Results: A total of 96 percent of the contacted graduates who indicated they are available for work were employed. Among them, 82 percent

are employed in jobs related to their training in community colleges. Nearly one quarter (23.8%) of the graduates contacted reported that they are continuing education.







Core Indicator 8: **Success in Subsequent, Related Coursework for Basic Skills Students**

Measure: The proportion of Fall 1993 basic skills education English and math completers who subsequently enrolled in any college-level English or math classes and completed these courses with a grade of C or better.

Data Source(s): CCCOES Research and Planning from SIS.

Technical Notes: Students' initial enrollment in basic skills English and math courses in fall 1993 was captured to form two groups. The grades they received from the basic skills courses were recorded. In the subsequent term (Spring 1994) those who completed basic skills with C's or better and continued in college level English and math respectively were tracked again to see whether they completed the college level courses successfully.

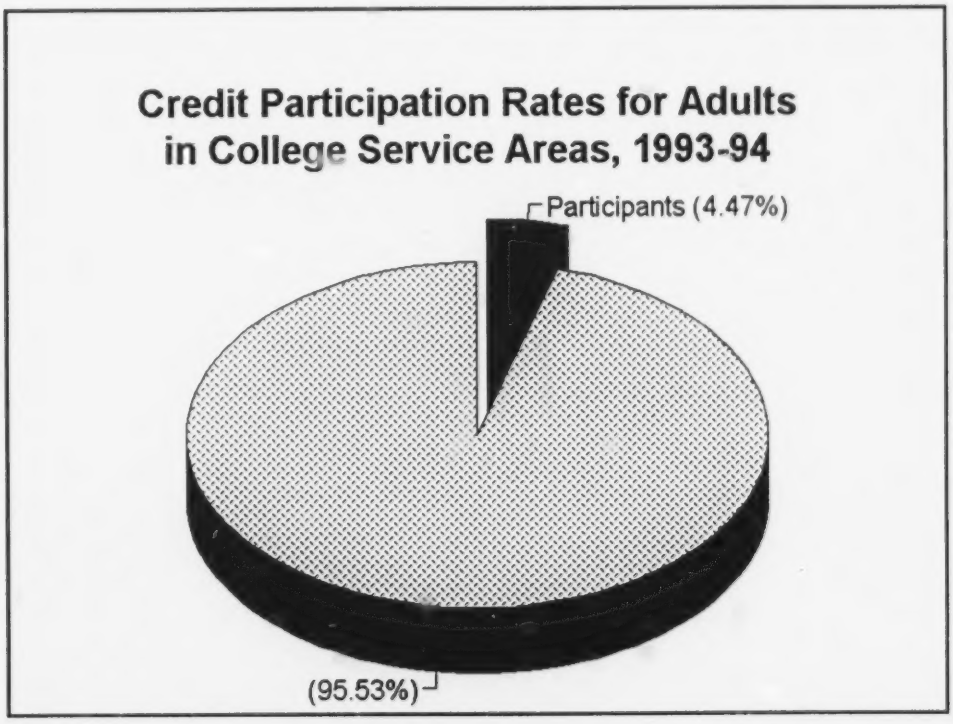
Results: Among those taking basic skills courses in fall 1993, 70 percent of the English students and nearly two-thirds (64%) of the math students completed the courses with a grade of C or better. In the subsequent term (Spring 1994), the successful completers of basic skills courses in the previous term were followed in their college level English and math courses respectively. Seventy-six (76) percent of the continuing English group and 72 percent of the

continuing math group could complete the college level courses successfully with a grade of C or better.

Core Indicator 9: Participation Rate in Service Area for Credit Programs

Measure: The proportion of the total population aged 18 and over residing in the college service area who register for at least one credit hour in the college credit programs during the 1993-94 academic year.

Data Source(s): CCCOES Research and Planning from SIS; 1990 U.S. Census data.



Technical Notes: The SIS system was used to calculate the total unduplicated headcount enrollment in college credit programs for academic year 1993-94, along with the total credit hours attempted. College service areas were defined according to the State Board policy, and the total population aged 18 and over was calculated for service areas using the 1990 U.S. census data. The participation rate is a rough estimate based on unduplicated headcount and service area population.

Results: The estimated figure shows that nearly 5 percent of the population aged 18 and over were served by Colorado system community colleges in credit programs. This figure does not account for those adults enrolled in non-credit programs and other community-based activities.

Core Indicator 10: Employer Assessment of Students

Measure: An overall satisfaction rating of CCCOES graduates' personal attributes and job skills by employers and/or supervisors

Data Source(s): CCCOES-developed accountability surveys.

Technical Notes: Colleges conduct surveys on employers/supervisors of their graduates every year to satisfy the existing accountability reporting requirements. No systemwide data are available for this indicator.

Core Indicator 11: Demonstration of Critical Literacy Skills
Core Indicator 12: Demonstration of Citizenship Skills
Core Indicator 13: Client Assessment of Programs and Services
Core Indicator 14: Responsiveness to Community Needs

Measure: No single statistic satisfies the intent of these indicators, neither are systemwide data available. Campuses will develop--or have developed--data for these indicators for inclusion in their own reports.